

Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

1 Equipment Description

Shipborne Radar Equipment (MED Item 4.35 and 4.37).

1.1 Models

Model
JMR-5400 Series Radar System

1.1.1 System Components

Models:

		S-Band 250 W			S-Band 30 kW	X-Band 25 kW			X-Band 10 kW				
		JMR-5472-S	JMR-5482-S	JMR-5482-SH	JMR-5430-S	JMR-5425-9X	JMR-5425-7X	JMR-5425-6XH	JMR-5410-6X	JMR-5410-6XH	JMR-5410-4X	JMR-5410-4XH	
Radar Display: 19" Colour LCD Monitor	NWZ-214 or ^{Note 1} NWZ-214-AC	X	X	X	X	X	X	X	X	X	X	X	X
Control unit, incorporating:	NCM- 963	X	X	X	X	X	X	X	X	X	X	X	X
Radar Process Unit	NDC-1678	X	X	X	X	X	X	X	X	X	X	X	X
Operation unit	NCE-5794	X	X	X	X	X	X	X	X	X	X	X	X
250W Solid State Transceiver/ Turning Unit c/w 8ft antenna	NKE-2632 ^{Note 2}		X										
250W Solid State Transceiver/ HSC Turning Unit c/w 8ft antenna	NKE-2632-H ^{Note 2}			X									
250W Solid State Transceiver/ Turning Unit c/w 12ft antenna	NKE-1632 ^{Note 2}	X											
30kW Transceiver/Turning Unit c/w 12ft antenna	NKE-1130 ^{Note 3}				X								
25kW Transceiver/Turning Unit c/w 9ft antenna	NKE-2255-9 ^{Note 3}					X							
25kW Transceiver/Turning Unit c/w 7ft antenna	NKE-2255-7 ^{Note 3}						X						
25kW Transceiver/HSC Turning Unit c/w 6ft antenna	NKE-2255-6HS ^{Note 3}							X					
10kW Transceiver/Turning Unit c/w 6ft antenna	NKE-2103-6 ^{Note 3}								X				
10kW Transceiver/HSC Turning Unit c/w 6ft antenna	NKE-2103-6HS ^{Note 3}									X			
10kW Transceiver/ Turning Unit c/w 4ft antenna	NKE-2103-4 ^{Note 3}										X		
10kW Transceiver/HSC Turning Unit c/w 4ft antenna	NKE-2103-4HS ^{Note 3}											X	

Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

1.1.2 Optional Components

The applicant declared that the following units may be added to the basic radar systems illustrated on page 2. These units have been assessed and tested in conjunction with the JMR-5400 series radar systems.

Model	Description
NCE-5625	Keyboard Operation Unit
NCE-5605	Track ball Operation unit
CWB-1659	19" Monitor Desktop Frame ^{Note 1}
NWZ-208	26 " Colour LCD Monitor ^{Note 1 & 5}
CWB-1660	26" Monitor Desktop Frame ^{Note 1}
NBA-5111	Rectifier
NQA-2443	Sensor LAN switch unit
NQE-1143	Junction box
NQE-3151A	Junction box
NJU-84	Performance Monitor (S-Band) ^{Note 3}
NJU-85	Performance Monitor (X-Band) ^{Note 3}
NJU-97	Performance Monitor (X-Band) ^{Note 3}
NQE-3141-4A	4 unit switching inter-switch
NQE-3141-8A	8 unit switching inter-switch
NQE-3167	Power control unit
NCT-4106A	NSK Unit (Gyro Syncro Interface)

1.2 Software ^{Note 4}

Identity	Description
01.00	Radar Process Unit (NDC-1678)

1.3 Notes

- Note 1 NWZ-214 and NWZ-208 are flush mount Displays for console / panel mounting or can be mounted in a CWB-1659 or CWB-1660 Stand for Desktop use.
- Note 2 This is a Solid State transceiver which has an internal performance monitor circuit.
- Note 3 These are magnetron based transceivers and require a matching performance monitor probe appropriately selected from the Ancillary units list.
- Note 4 This approval remains valid for equipment including subsequent minor software amendments (Maintenance No. 01.00.014 or later) which have been formally accepted in accordance with the TÜV SÜD Testing and Certification Regulations.
- Note 5 The NWZ-208, 26" Monitor can be used in this Cat 2 radar system as an alternative to the 19" Monitor where more appropriate to the ship's bridge layout.
- Note 6 This system follows the general requirements of IMO Resolution MSC.302(87), Module C, and the alert requirements of IEC 62288 Edition 2.
- Note 7 (EU)2019/1397 gives a last placing on board date of 29/8/2021 for equipment approved against the test standards listed above. See Conditions of Validity.

Annex to Marine Equipment Directive Module B Type Examination Certificate



Danmark

2 Assessed Requirements

2.1 Implementing Regulation (EU)2019/1397

2.2 Compliance Requirements for MED/4.35 and MED/4.37^{Note 7}

IMO Resolutions	International Testing Standards	
Resolution MSC.192(79)	IEC 62388:2013	Marine Shipborne Radar Equipment
Resolution MSC.191(79) Resolution MSC.302(87)	IEC 62288:2014	Presentation of navigation-related information
Resolution A694(17)	IEC 60945:2002	General Requirements for Marine Navigation Equipment (Inc. Corr1:2008)
	IEC 61162-1:2016	Digital Interfaces – Part 1, single talker
	IEC 61162-2:1998	Digital Interfaces – Part 2 High Speed interface
	IEC 61162-450:2011 with Am 1 (2016)	Digital Interfaces – Part 450 Ethernet Interface
ITU-R Recommendations	M.1177-4:2011	Unwanted Emissions from Radar Systems

3 Technical Documentation

3.1 Declaration of Conformity

MED-DoC-JMR-5400 DK

Modified

2019-11-27

3.2 User Guide

Marine Radar Equipment Simplified Instruction Manual 7ZPRD0955, Mar 2019 Edition 4

Marine Radar Equipment Instruction Manual (Standard) 7ZPRD0950, Oct 2019 Edition 4

Marine Radar Equipment Installation Manual (restricted to Service technicians) 7ZPRD0953,

Oct 2019 Edition 4

3.3 Test Reports

IEC 60945:2002 (inc Corr.1)	75937370 Report 04 Issue 2, 2017-09-29	75937370 Report 05 Issue 1, 2017-05-31
	75923142 Report 02 Issue 2, 2014-01-22	75901288 Report 01 Issue 1, 2007-07-10
	75923142 Report 01 Issue 3, 2014-01-22	75901288 Report 02 Issue 1 2001-07-10
	75923142 Report 05 Issue 3, 2014-01-22	75901288 Report 03 Issue 1 2001-07-10
	75924011 Report01Issue1, 2014-04-11	TUV Zacta, JPX-TR-17101-0, 2017-05-18
	Airbus, FM1701477, 2017-05-17	CSD 17-060(E), 2017-04-28
	Corrosion Report, 2013-12-16	CSD 07-511(E), 2008-01-31
	Z071C-13420, 2013-12-11	YN0708005-11, 2008-03-28
	13-326(E), 2013-10-15	YN0712002-1, 2007-12-18
	YN0708005-1, 2007-12-07	YN0801004-1, 2008-03-13
	007-511(E), 2008-01-31	YN0706005-1, 2007-11-13
	YN0709007-11, 2007-11-13	YN0706005-12, 2007-12-11
	YN0709007-1, 2008-01-31	YN0706005-13, 2007-12-11
	CSD 08-311(E), 2008-10-08	-
IEC 62388:2013	75937370 Report 02 Issue 1, 2017-09-29	Sea & Rain Clutter evaluation report
	75937370 Report 07 Issue 1, 2018-04-12	JMR-5400, 2017-05-17



Danmark

Annex to Marine Equipment Directive Module B Type Examination Certificate

3.4 Test Reports (Continued)

IEC 62388:2013 Annex B & ITU-R M.1177-4	QinetiQ/MS/EES/TSTR0800603/1, 2008-06-19	QinetiQ/EMEA/TS/CR0803478/2, 2008-04-01
	QINETIQ/EMEA/MLW/TSTR170116, 2017-05-25	QINETIQ/14/01527 V1.3, 2014-06-17
	QINETIQ/14/00249/1.1, 2014-03-06	QINETIQ/EMEA/MLW/TSTR170116, 2017-05-25
IEC 62288:2014	75937370 Report 01 Issue 1, 2017-08-21	-
IEC 61162 Series	IEC61162-1_Annex B report, 2017-09-25	ITU-T X.27/V.11 Test report, 2017-08-25
	IEC61162-2_Clause8 report, 2017-09-25	ITU-T X.27/V.11 Test report, 2017-08-25
	IEC61162-450 function test, 2017-09-04	Evaluation Report of IEC 61162-450 Ed 1.1, 2019-11-13

3.5 Build Status

3.5.1 Hardware

Marine Radar Equipment Installation Manual: 7ZPRD0953, Sept 2017 Edition 3

Parts Lists:

NKE1632_Parts Lists.pdf, 2013-12-04	Dated	2013-12-04
NKE2632_Parts Lists.pdf, 2013-12-03	Dated	2013-12-03
NKE2632H_Parts Lists.pdf, 2013-12-03	Dated	2013-12-03
Parts List_NDC-1678 Display Unit.xls, 2017-10-02	Dated	2017-10-02
Parts List_NKE-2255 Scanner Unit.xls, 2017-10-02	Dated	2017-10-02

4 Additional Information

The products listed on this certificate were originally assessed and certified by TÜV SÜD BABT under Notified Body number 0168. This certificate replaces TÜV SÜD BABT Certificate Number BABT-MED000113 Issue 03.

5 U.S. Coast Guard Number

This product has been assigned U.S. Coast Guard Module B number
165.116/EC2443 (CAT 2 Radar)
165.217/EC2443 (CAT 2 Radar for HSC)

To note type approval to Module B only as it pertains to obtaining US Coastguard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 18th, 2019

6 Conditions of Validity

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with TÜV SÜD Danmark or a person appointed by TÜV SÜD Danmark to perform that role.

Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be reapproved prior to it/them being placed on the market or onboard vessels to which the amended regulations or standards apply.

The Mark of Conformity may only be affixed to the above type approved equipment and a manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of Annex B of the directive is fully complied with and controlled by a written inspection agreement with a notified body.

Signature: Tom Twynam

Date: 2019-12-03

Print Name: Tom Twynam

On behalf of TÜV SÜD Danmark